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THE GENESEE FARMER.

SATURDAY, SEPTEMBER 29, 1838.

Death of Hon. Dan Bradley.

Extract of a letter from a friend at Marcellus, dated Sept. 21st, 1838:

"DEAR SIR—The melancholy duty devolves upon me of communicating to you the death of our truly estimable citizen, Judge BRADLEY. He died yesterday morning about 10 o'clock. His death was expected for more than a week before, he having (as I have before informed you,) been in a decline for a number of months past. The cause of his death was a general debility of the system from old age. In his death the community have sustained an irreparable loss. He was in the 72d year of his age."

WHEAT WORM.

The Maine Farmer has been publishing several essays on the subject of the wheat worm, elicited by the proffer of a reward of fifty dollars for the best paper on the subject, and when the series are finished, we shall endeavor to place the substance of the information they may contain before our readers, if not the most valuable of the papers themselves. We have read one or two of them, and find them well calculated to put the farmer on his guard against this pest, if not to furnish a preventive to its attacks. The reading of these papers has the more firmly convinced us, however, of the necessity of having the examination conducted by men of science and skill in entomology, and having from some quarter an adequate compensation secured for the time that must be spent in the examination. *The prevention of the ravages of the wheat worm is a national object.* If it has not already extended over the whole, the yearly advance is such as to render it certain that such will ere long be the result; and how much better would it be if a timely discovery of the nature, kind and habits of the insect, could prevent such a wide spread destruction. Had the national legislature, at the last session, offered as a reward for an effectual preventive of the worm, and the complete history of the insect, the sum that was spent in listening to many of the speakers against time that disgrace the Congressional halls, we cannot doubt that within two years the country would have been benefited to the amount of millions.

We were much impressed by the pointed truth contained in the folldwing paragraph from a friend's private letter the other day, the more weighty as it is from a man who is himself master of the subject of which he speaks:

"Perhaps there is not at this time, any work more wanted than an accurate description of predatory insects, with a full account of their manners, and the easiest way to destroy them;—accompanied by a notice of such kinds as prey on the preceding classes, so that we may know our friends from our enemies. It is scarcely reasonable, however, to expect such a work from the ordinary race of entomologists. To benefit the agricultural class, the writer should have his perceptions sharpened by holding the plough or the pruning knife, and his feelings and interests consequently enlisted."

Farmers make good observers; all that is lacking is the knowledge that shall turn this acuteness of observation to the best account. The men who have furnished these essays for the Maine Farmer clearly establish these facts. Such observations should be multiplied, for each one furnishes new means, when properly conducted, of arriving at the truth. But, if nothing should be done, we have no reason to believe that the destruction will continue to be as great in future years, as it already has been in many places. Like the Hessian fly, it will have its day; overrun the country, and produce immense loss, which we think might in a great measure be prevented; will then pass away, perhaps to return at intervals, or else give place to some other more powerful, if not more mischievous, depredator. A wheat grower, only a day or two since, assured us that three years since, it seemed as if his crop would be eaten up by the worm. In threshing immediately after harvest, the worm was separated from the wheat almost by bushels, and his loss was serious. Since that time his loss has been comparatively nothing; but few worms have been seen, though as yet he has taken no pains to guard against or prevent them. Such may be the result generally; though no measures calculated to secure so important a crop can with safety be neglected by the farmer.

Morus Multicaulis, at Sodus.

A few days since we had the pleasure of spending a day at Sodus; and in that pleasant and fertile region, nothing more pleased us than the fine plantations of Chinese mulberry on the farm of Mr. Dunning of that place. Nothing could more effectually demonstrate the adaptation of the soil and climate of the southern shore of Lake Ontario to the culture of the Mulberry, and the growing of silk, than a visit to this plantation, and examination of the beautiful cocoons produced from worms fed on the foliage of these trees or plants the present season. Desirous of ascertaining the extent, and the expense of such a plantation we addressed a note to the proprietor to which he kindly responded, and which is appended to this notice. After receiving Mr. Dunning's note, we had the pleasure of an interview with Mr. Smith, a gentleman formerly from Sodus, but now of Burlington, New Jersey, and one who is largely interested in the extensive mulberry plantations and silk manufactories establishing near that place. They are feeding a million of worms the present season, and intend to double the number the next year. We regretted to learn, however, that it was the intention of those interested in the mullberry plantation of Mr. Dunning to remove the whole to Philadelphia, where they were wanted for feeding worms, and to supply the increasing demand for plants. We hope that some gentlemen who feel an interest in the culture of silk will take measures to prevent the whole being taken from this section of the country, as their rapid growth and magnificent foliage, so much exceeding that of the common kinds, proves that the plants are of the most approved varieties of the Morus multicaulis.

"SODUS, Sept. 8th, 1838.

Mr. W. GAYLORD—Sir: Your note soliciting information respecting the mulberry trees which I am raising, is received, and with pleasure I will endeavor briefly to answer your queries to the best of my ablility.

The trees are the true Morus multicaulis, or Chinese mulberry; and were obtained partly from Connecticut, and partly from Philadelphia, where they were formerly imported from France.

Thirty-five hundred trees, of last years growth, were brought here last spring, averaging from eighteen to twenty-four inches in length, many of which were more or less injured, so as to prevent the germination of at least one third the number. They were planted out about the middle of May on three fourths of an acre of ground, by placing them end to end, in shallow furrows, three or four feet apart, and covering the whole lightly, root and trunk.

The expense of planting and hoeing has not exceeded ten dollars, and there are now growing about fifteen thousand trees, ranging from two to five feet in height, loaded with foliage, some leaves measuring ten inches in diameter.

Only about three thousand worms have been fed from these trees, and this merely for experiment, and they have succeeded admirably; producing very fine straw colored cocoons. Judging from the quantity of leaves consumed by these worms, one hundred thousand might have been fed from these trees without the least injury to them. Trees of this description are now selling at fifty cents each in Philadelphia, and the vicinity.

Yours, &c. J. D. DUNNING."

We are inclined to think that Mr. Dunning has underrated the number of the trees produced, and the number of the worms that might have been fed from them without injury to the plants, as he certainly has the size of the leaves, many of which we found to be from eleven to thirteen inches in length, and from ten to twelve inches in width. The ease with which the foliage can be gathered is at once apparent to all; and the great avidity with which the worms will feed on such leaves in preference to the common mulberry is evident to all who have made the experiment. We were assured by Mr. Everett of Onondaga, that the worms would immediately leave the foliage of the white mulberry, when presented with that of the Chinese, and its rapid growth, and tender texture would indicate that such preference is natural. The immense profits made from this three fourths of an acre will not fail to arrest the attention of the reader. Admitting the cost of the plants was the same as their value now, as stated by Mr. Dunning, and that the cost of packing, transportation, and cultivation, was one hundred dollars, the capital invested would be $3,600. At the rate of fifty cents a plant, (and Mr. Smith assures us that the average value of the lot when delivered at Philadelphia will exceed that sum,) the value of trees is now $7,500; supposing, as stated by Mr. Dunning, there are only fifteen thousand plants, leaving a profit of near four thousand dollars; or rather more than cent. per cent. on the capital invested for one year.

Opinions of a Pennsylvania Farmer.

We give the following extracts from a private letter from one of the best-informed and most successful farmers in Pennsylvania. They will be read with interest.

Spring Wheat.

"I have been successful in the cultivation of *Italian* spring wheat; although the various impositions and frauds practiced in selling the suppositious seed, has retarded that success, until lately. I consider it much superior to any other variety we have yet met with; the berry this year is not so large perhaps as my other spring wheat, and is therefore partially lost in running through the screen of most mills, but the thin transparent epidermis, and the quantity of farinaceous matter make up the deficiency. We have not realized the difference between sowing shallow and deep, so strikingly illustrated by the plates of this publication. (Colman on Spring Wheat.) The wheat which from peculiar circumstances I was induced to plough in, instead of harrowing, being much better than the adjoining part of the same field that was harrowed. The general rule is perhaps affected by the nature of the soil; light soils most probably may be planted deeper than heavy loams or clays."

Change of Seed.

"Diseases (in plants) are said to be propagated and aggravated by continually cultivating the same seed, and this is used as an argument for frequently changing the seed. Now this is very judicious advice, where the farmer gets better seed by the exchange; but suppose he happens to get worse—and where there are two parties to such a bargain, one of them is almost necessarily worsted—the argument is, that both are benefited, because, "a change of soil produces a change in the habit and constitution of the plant, *and imparts new vigor to it.*" The first part

of this conclusion is true, but the inference is not so clear that new vigor is imparted to the plant in consequence. It may seriously deteriorate it; and where the change is made from a soil well adapted to the plant, to another soil that is not so suitable, this deterioration will soon become manifest. The reasoning drawn from the analogy between plants and animals, that imperfections and diseases are propagated and transmitted from the parent to the offspring, is undoubtedly true; but it is equally certain that the perfections and improvements, apparent from careful culture, and careful breeding, are also transmitted and propagated in the same manner. The only unerring rule appears to be that "like produces like" in every department of Nature; "what a man sows, that shall he also reap;" and if we raise the best grain, and the best farm stock, by selecting the best plants and the best animals for that porpose and rejecting all others, we shall enjoy the benefits of our care and attention in both cases alike. Besides plants do not always become acclimated without several years cultivation in the same soil and latitude, and when this object is obtained, it requires some care to be frequently changing, which an invariable selection of the seeds or animals may prevent. Thomas H. Baden has never changed his seed corn; nor William H. Johnson his grass seed; and they are both celebrated for having the best and most productive kinds."

Use of Lime.

"The notions of our Yankee farmers upon the mode of applying lime to soils, are the subject of constant ridicule to our Pennsylvania farmers. For instance, Mr. Colman says in his Report—"the application of lime is injurious, unless made in dry weather, and when the land is dry; because if applied at other times it is apt to be formed into a mortar which is difficult of solution." [The same remark in substance, on the use of lime, occurs in the Farm Reports of the London Farmer's Library; but we have never known an instance where this formation of mortar, or any effect akin to it, has been produced by the use of lime in this country.—Ed. Farmer.] According to these notions so generally entertained at the east, it would be a very uncertain and doubtful matter when to apply this active material, because no man knows whether the ground will remain dry an hour after the application; perhaps an hour, or half an hour after is enough to eradicate this supposed peculiar tendency; but the idea of making mortar out of the small quantity of some twelve or twenty bushels—(the quantity recommended in Mr. C.'s survey)—to an acre of land, which would barely whiten the surface, to those who are in the habit of using it, appears about as rational as to suppose that the quantity of carbonic gas contained in the atmosphere would destroy animal life. In every part of German Pennsylvania, lime is applied at all times, and at all seasons, by day and by night, summer, winter, spring, and autumn, and whether it rains or shines, no limit being usually placed as to quantity, except the ability and time of the farmer and his team; unless it be that some care must be taken not to apply too much quicklime to one spot. It is generally carted to the field from the kiln, piled up in heaps large or small as may best suit the convenience of the farmer, exposed to all the kinds of weather, wet or dry, hot or cold, upon green sward, the stubble or the ploughed land, and the idea of its becoming mortar never troubles him. Indeed I have more than once heard that mortar from old plastered houses was one of the best applications that could be made to land, and equal to other lime, and that the places where lumps or concretions had been collected evinced superior productiveness."

To prevent a Horse breaking his Bridle.

Great inconvenience is sometimes experienced, and serious mischief done, by horses breaking their bridles. This may be prevented, and the necessity of providing great awkward halters avoided, by a simple remedy, which has been found very efficacious. A small pad is placed under the bridle, made as follows:—The inner side is of cloth, and the outer of stiff leather, in which are inserted a number of sharp nails, pointing inwards and passing nearly through the pad. All ordinary times, and with moderate pressure, these are not felt; but when the horse draws violently, they at once pinch the head, and the animal is glad to desist. J. J. T.

CULTIVATION OF FRUIT---No 9.

THE PLUM.

Those who have seen only the common varieties of the plum cultivated by farmers in this state, can have but a very imperfect idea of the flavor and excellence of the most improved varieties. When the same labor in cultivation, with a little additional care in procuring fine sorts, would afford the very best fruit, it is to be regretted that ninety-nine hundredths, or even more, of the fruit cultivated, should be scarcely fit for eating. To facilitate in procuring better, the following list, with remarks, is given.

White Primordian, Early Yellow, or *June Hative*, is one of the very earliest of plums, ripening generally in western New-York about the middle of the seventh month (July,) and is chiefly valuable on this account. It is a small yellow fruit, a good bearer, with a sweet taste, though not first rate. It appears to be the best plum at the season.

Morocco.—This is a small plum, but very productive, skin a dark purple, flesh juicy and high flavored. It ripens early in the eighth month, (August.)

Wilmot's Early Orleans.—This is a large fine fruit, ripening with the Morocco.

Green Gage.—This is generally admitted to be the finest of all plums; the genuine fruit is of medium size, and round; the stalk half an inch long, a little bent, and inserted in a small funnel-shaped cavity; the skin is yellowish green, when fully ripe nearly yellow, *mottled* with russety red near the stem; flesh melting, separating imperfectly from the stone, juicy, sugary, and of exquisite flavor. There are many varieties cultivated in this State under the name of Green Gage, which appear to have originated by planting the stones of the genuine variety, but are greatly inferior in flavor. There are other varieties of a small green plum, scarcely worth cultivating, which are frequently found in the gardens of our farmers, and are also denominated the Green Gage, though they no more resemble the genuine fruit than the wild crab resembles our finest varieties of apples. *Prince's Imperial Gage* was obtained from the seed of the Green Gage; the fruit is much larger than that of the Green Gage, and the tree is very productive. Manning says that this is "the most productive and profitable of all plums." Kenrick says: "A single tree of this variety at Charlestown (Mass.,) owned by S. R. Johnson, has for several successive years yielded crops which were sold at from $40 to $50 per annum."

Orleans.—Fruit nearly round, middle sized or rather large, skin reddish purple, flesh yellow, firm and good, separating freely from the stone. An excellent fruit, ripening about the time of the Green Gage. *Gifford's La Fayette*, figured and described in a former volume of the Genesee Farmer, was obtained from the seed of the Orleans, and is a most excellent fruit, remarkable for the richness and sprightliness of its flavor.

Washington.—Fruit oblong, very large, orange yellow, with a fine blush next the sun; flesh yellow, firm, sweet and excellent. Though the flavor of this is inferior to that of some other varieties, it is highly esteemed as a first rate plum. Ripens about a week later than the Orleans.

Imperatrice.—A good plum, ripening in the tenth month (Oct.) One of the best late plums.

Coe's Golden Drop.—Fruit of large size, skin golden yellow, spotted with rich red next the sun, flesh yellow, sweet and delicious. Like the preceding, slightly necked next the stem, a clingstone, and a great bearer. The best late plum.

The Egg plum, or *Yellow Magnum Bonum*—Is a very large plum, of a sweet agreeable flavor, but as the texture is rather coarse, is chiefly used for cooking and preserving. The same remark applies to the Red Magnum Bonum, which is harsh and acid. These two are admired as table fruit where finer varieties are unknown.

There are several other varieties which are particularly recommended for their excellence, as the *Italian Damask, Brevoort's Purple Washington, Purple Gage, Bleecker's Gage, Cooper's plum, German Prune and Huling's Superb.*

The varieties of the plum are propagated by budding or grafting. The former can only be successfully practised on the most thrifty stocks. The soil should be a rich sandy loam, or if a *sandy* soil cannot be employed, it should not be cold and heavy, but rich and loose.

The principal enemy to the plum is the *Curculio.* This is a small insect with an elongated thorax and head which resembles a proboscis in appearance. The whole insect is not more than a quarter of an inch long, of a dark brown color, the sheaths covering the wings, slightly variegated with lighter colors, the body resembling in size and appearance a ripe hemp seed. About the time the fruit attains the size of a large pea, it commences its work of destruction. It makes a small incision in the young fruit, and lays its egg in the opening. Its presence may now be perceived by examination, as these incisions are very easily seen. The egg soon hatches into a small white worm, which penetrates deeper and feeds upon the fruit, causing it to fall prematurely to the ground, or if it ripens, it is unsound and gummy. The worm, when the fruit falls, makes its way into the earth, where it remains through winter, as is supposed in the pupa state, to be transformed the succeeding spring into a perfect insect and thus to perpetuate its race. Several expedients have been proposed and tried, to destroy it or prevent its ravages. The easiest and most effectual is that of confining a sufficient number of swine with the trees to eat all the injured fruit which falls, in doing which, they of course destroy the worm contained in them before it can escape to the earth. The crop of the succeeding season will of course escape. When this has been pursued perseveringly and thoroughly it has proved completely successful. In one instance, known to the writer, the plum trees bore well for seventeen successive years. To render this operation easy and effectual, all trees which are liable to attacks of the Curculio, should be planted separately, so that they may be enclosed apart for the confinement of the swine, which if permitted to range the whole orchard would not do the work so effectually.

But swine cannot always be admitted, and it is also desirable to preserve the fruit of the *present* season. In this case the best remedy is the following. Spread white sheets under the tree, and jar it briskly. The insects immediately drop upon the sheet, and remain motionless a few seconds, during which time they may be destroyed by a pinch of the thum and finger. While lying upon the sheet, they are not readily distinguished by an inexperienced eye from the withered blossoms. The operation should be repeated twice or three times a day so long as any remain. This remedy rarely fails if thoroughly and unremittingiy pursued. The importance of *jarring* the tree strongly will be perceived by the following statement of a correspondent in the Genesee Farmer of the second volume. "Not three days ago, I saw that many of the plums were punctured and began to suspect that *shaking* the tree was not sufficient. Under a tree in the remote part of the fruit garden, having spread the sheets, I therefore made the following experiment: On *shaking it well*, I caught *five* Curculios; on *jarring it with the hand*, I caught *twelve* more; and on *striking the tree with a stone, eight* more dropped on the sheets. I was now convinced that I had been in an error; and calling in the necessary assistance, and using a hammer to jar the tree violently, we caught in less than an hour, more than two hundred and sixty of these insects."

Trees near path doors and other frequented places, are frequently observed to be full of fruit, while others are all destroyed. This appears to be in consequence of the insect being frightened away from the former by frequent passing. Hence favorite trees of the plum, nectarine or apricot, may be often planted to advantage near such frequented places, and will escape the ravages of this insect.

The plum is sometimes subject to a disease termed canker, which, according to Buel, "is a kind of vegetable

gangrene, if the term may be allowed, which if not timely arrested, generally proves fatal to the tree. It is a vegetable excrescence upon the stock and limbs, at first green, and afterwards becoming black. The affected branch soon dies, and the whole tree gradually perishes. It is generally supposed to be caused by some insect, whose poison injected into the tree, vitiates the sap. The only preventive known to prove successful, is to cut off the diseased parts as soon as it appears, and commit them to the fire. This plan has been adopted in the writer's garden, and in the Albany nursery, for some years; and hardly an instance of the disease occurs in the season."

From some unknown cause, a large number of the plum trees in this state, in 1833, shed their leaves prematurely; and the necessary effect of this defoliation was the suspension of the growth of the wood, and prevention of maturity in the fruit. Many trees thus received a check from which they did not recover. Many, however, probably the greater part, have since resumed their usual healthy appearance and growth, and produce fruit as before. J. J. T.

Preservation of the Peach Tree.

We find the following in a late number of the Baltimore Patriot, and if it should assist in preserving this delicious fruit from the attacks of insects, or the tree from disease, it will be most welcome to the peach grower. At any rate it can do no injury, and is well worthy of a trial.—*Ed. Farmer.*

"This valuable fruit has for a considerble number of years past fallen a victim to a destructive insect that preys upon it near the root, which is discoverable by a gummy substance issuing from the trunk. Many receipts have been given to prevent and destroy this runious insect, but they do not appear in many cases to have had the desired effect. The writer of this had a favorite tree in his yard, which has been for some years infested with these insects, and which he has taken great pains to remove by the application of ashes, lime, tar, &c., all of which have failed to answer the intended purpose. In the course of the last spring, when the leaves came out, they changed to a pale color, and to all appearance the tree was going to die. As a last resort for its restoration, he had recourse to charcoal, and a small box was placed around the roots of the tree, and filled with this article. It so far succeeded, that in a short time the tree revived, and took a second growth, and now is in a luxuriant state, the leaves of a dark green color, and much surprises all who had previously seen it."

Transplanting fruit Trees.

On the subject of removing fruit trees, Lindley remarks, "Trees cannot be removed from the nursery too soon after the wood has become ripe, and the leaves fallen off; for between this time and the winter many of them will make fresh roots, and be prepared to push forth their young shoots with much more vigor in the spring." When trees are to be removed but a moderate distance, so that they need not be out of the ground but two or three days, the first of the month of October is not too early for transplanting them; but at this time the leaves usually remain on them. Trees may be removed much earlier in autumn than is generally supposed, and they should be removed much sooner than is commonly practiced in order that the benefit which Lindley describes may result. The fact the leaves are yet upon them, and in a green state, is no objection; for after they have ceased growing, which may be ascertained by examining the ends of the branches, no danger is to be apprehended. If transplanted at this time, they will harden their wood afterwards, and throw out their fresh shoots. J. J. T.

MILK NUTRITION.

The following remarks, as beautiful as they are just, we copy from Prof. Prout's Bridgewater Treatise, on the chemistry of organization. The effects, which so important a principle in nutrition as milk, must have on the organization, and consequently health of the system, should not be overlooked by those who have children to provide for, or by those adults into whose diet milk enters as a large constituent. Milk from diseased individuals or animals, or from those fed on improper food, is a poison, and should be treated as such.

"This view of the nature of aliments, is singularly illustrated and maintained by the familiar instance of the composition of *Milks*. All other matters appropriated by animals as food, exist for themselves; or for the use of the vegetable or animal of which they form a constituent part. But milk is designed and prepared by nature expressly as food; and is the *only material* throughout the range of organization, that is so prepared. In milk, therefore, we should expect to find a model of what an elementary substance ought to be—a kind of prototype, as it were, of nutritious materials in general. Now, every sort of milk that is known, is a mixture of the three staminal principles we have described; that is to say milk always contains a *saccharine* principle, a *butyraceous* or oily principle, and a *caseous*, or, strictly speaking, an *albuminous* principle. Though in the milk of different animals these three staminal principles exist in endlessly modified forms, and in very different proportions; yet neither of the three is at present known to be entirely wanting in the milk of any animal.

Of all the evidences of design in the whole order of nature, Milk affords one of the most unequivocal. No one can for a moment doupt the object for which this valuable fluid is prepared. No one can doubt that the apparatus by which milk is secreted, has been formed especially for its secretion. No one will maintain, that the apparatus for the secretion of milk arose from the wishes or the wants of the animal possessing it, or from any fancied plastic energy. On the contrary the rudiments of the apparatus for the secretion of milk must have actually existed in the body of the animal, ready for development, before it could have felt either wants or desires. In short it is manifest that the apparatus and its uses, were designed and made what they are, by the great Creator of the universe; and on no other supposition can their existence be explained. * * * *

But it is in the artificial food of man, that we see this great principle of the combination of three staminal principles of food, most strongly exemplified. He, dissatisfied with the spontaneous productions of nature, culls from every source; and by the force of his reason, or rather of his instinct, forms in every possible manner, and under every disguise the same great alimentary compound. This, after all his cooking and his art, how much soever he may be disinclined to believe it, is the sole object of his labor; and the more nearly his results approach to this object, the more nearly do they approach perfection. Even in the utmost refinements of his luxury, and in his choicest delicacies, the same great principle is attended to; and his sugar and flour, his eggs and butter, in all their various forms and combinations, are nothing more or less than disguised imitations of the great alimentary prototype Milk, as furnished to him by nature."

Rust in Wheat.

Mr. Holmes—Much has been said in your valuable paper on the subject of rust in wheat—its cause, remedy, &c. &c. It is not my purpose to enter into a discussion of the cause of this evil, for an evil and a serious one too we must regard it, and any thing that will free us from it will be a great blessing to the farmer. I am informed that there is a variety of wheat now cultivated in the town of Windsor, and some of the adjoining towns that is not liable to this malady. It has been sowed in the same field with the common wheat, and at reaping time found in perfect order while the other has been nearly destroyed by rust. It is said to yield more to the acre and produce more flour to the bushel, than any other wheat that has been cultivated in this part of the country. The flour from it is also of a more beautiful texture, being hardly inferior to the best Genesee when well manufactured. This wheat was first introduced into Windsor, by Jesse Jewett, Esq. of whom perfectly clean seed can be obtained this fall.

The reason given for its not rusting, is, that the stalk is twice as thick as the common wheat, and is consequently harder, and can contain the sap without any bursting of the sap vessels, which I believe, is the cause usually assigned for rust.

I have not sown this wheat myself, but intend to next year, and if what is said of it be true, it is a valuable acquisition to our crops and will be advantageous to farmers to try it.

Perhaps Mr. Jewett or some one else, who has raised it, will give you its name and a history of it.—*Maine Farmer.*

The Importance of Agricultural Improvement.

It is by comparison that we estimate the value and qualities of things. If our stock of cattle, horses, sheep and hogs are as good as those in our neighborhood or as any that may have been noticed, we call them good. We have good crops of corn, and grain of all kinds, if we see no better; and a good or poor farm by the same comparison. But when we extend our researches a little beyond our own precints, we often find that what we have been accustomed to call good or poor, will not be applicable in the same sense that we have heretofore viewed the terms, and a different standard is necessary. Some, after visiting the Rocky river, or Black Hawk country, come home with different ideas of the quality of soils and look upon their heretofore good farms, with an eye of indifference, and naught will do but to sell off and commence a new in the wilds of the farthest west. They are highly delighted with the rich prairie country, and dwell largely on the advantages untold. They are too often partial in their comparisons, and forget that the soil of their farms is succeptible of great improvement, and that they possess many comforts and privileges at home, that they must for a long time be deprived of in their new location. Such perhaps had better migrate, and leave their improvements to be occupied by those better able to appreciate their value, and with minds imbued with the spirit necessary to a further improvement.

Such persons extend their comparisons for a different object. They see and hear of a land more productive than their own, without that itching desire to pull up stakes and make many sacrifices for the purpose of occupying it; knowing full well that all cannot abide in one place, they feel satisfied with their location, put themselves about improving their own soil with the means they possess—and they will soon find they need not go from home to look for the standard of excellence, for they have it on their own premises.

Because a man has a farm inferior to his neighbors, or that some distant place is better than the land in his vicinity, we conceive to be no reason for him to change his location, if he is otherwise suited. Various motives and causes often make it proper to change, but when a man is fully determined to make the best of his situation, and set about improving his soil, improving his crops, improving his stock; he at the same time is improving his mind; and his children are not forgotten; for improvement is his motto, and is adhered to, in all the various departments of his household—he will generally find it as profitable to remain at home, and enjoy the comforts of an older settlement.

We hardly thought of lecturing on emigration when we commenced this article but wished to impress on the minds of our farmers the importance of improving their farms, and their systems of farming.

A pretty uniform system is adopted in new settlements and for aught we know as good as any, but after a considerable portion of the farm becomes cleared it is time to look toward the introduction of the improvements of older settlements. We are favored with varieties of soil, adapted to the raising of different articles of produce, and in order to farm it profitably, we must as far as possible suit the crop to the soil. Wherever the soil will admit of it, a rotation of crops is desirable, and on almost every farm a portion of the land can be profitably occupied in this way; but much of the land through the central parts of our state is much better adapted to growing grass than grain; and on such land it would be improper to make the raising of corn and fattening of hogs the main business. Here the raising and keeping of cattle will be more profitable. Again on the dry and rich soil of the river bottoms, corn is the most appropriate crop with a rotation of other grains. By a little observation, a farmer will discover the most profitable course of culture, and on lands adapted to the purpose he ought not to remain contented with smaller crops than are obtained in older settlements on inferior soil. "What has been done can be done again" is a remark frequently made, and we see no reason why a farmer who has good corn land should be satisfied with fifty bushels to the acre when one hundred can be obtained. We have seen the land and the stalks, from which 127 1-2 bushels of shelled corn were taken from the acre, and in several instances over 150 have been obtained, in the state of New-York. It was by manuring and superior cultivation that it was done. Let us bestow the same care and much larger crops than we now get, will be the result. Just so with stock, and every production of the farm.

Much land that is now unfit for grain by proper draining may be made excellent for the purpose. When a farmer is fully resolved to make every improvement in his power, he will find many ways of doing it he had not before thought of. One of the most important considerations will be the saving of manual labor, for which purpose machines of various kinds are in use in the east; some of which will soon be introduced among us.

When one or more individuals in a neighborhood are fully impressed with the necessity, and a desire for improving their farms, their example will have a very beneficial influence. The standard of excellence will be raised, and others will follow their example. Many who are trudging along in their half measures, would not rest satisfied with their imperfect and unprofitable system, when they saw their neighbors enjoying superior comforts, and realizing greater profits, in consequence of the improvements they have adopted. Much good will result from the spirit of improvement when it becomes general. Roads will be vastly improved. Schools will be better supported, and the minds of the people better informed; and may we not reasonably suppose their morals will be improved.—*Indiana Farmer.*

COMMUNICATIONS.

The Morus Multicaulis.

Mr. Tucker—Being a subscriber to your useful paper, we find it devoted to the promotion of Agriculture and diffusion of farming and horticultural information. The cultivation of the Mulberry and the rearing of the Silk Worm, we discover has occupied a share of your attention, and we presume you will readily publish any thing in this connection that will aid the public weal.

There is no necessity for saying at this late hour, that the cultivation of the Mulberry and the growing of Silk will soon become an important branch of useful industry, and a source of wealth to the United States, for it is already acknowledged by universal consent, that the American climate and soil is as congenial to silk growing, and the sons of America as well calculated for manufacturing operations, as any nation in the world.

You are no stranger, we presume, to yankee enterprise and Connecticut perseverance; and are therefore aware that they have done wonders in that state for some years in silk growing operations, having realized a profit with no better food for the Silk Worm than the common white mulberry, but recently however the Morus multicaulis was offered them, and they immediately commenced testing its qualities and estimating its real worth, and their long experience in the mulberry had qualified them to decide correctly; and when they became thus satisfied with its superior worth, and found by experience that the roots standing in the earth will endure our winters and send forth an increased number of stalks every year, they adopt its use and push forward its cultivation with all their energy and skill, and are now increasing and vending it by thousands and tens of thousands, and we are informed have commenced cutting down their white mulberry trees, as no longer of use.

And, sir, we are prepared to say, without fear of contradiction, that the deliberate conclusion and doings of those so immediately and deeply interested, will speak loud, and nothing can prevent it from being heard and felt in every part of this Republic.

You are aware, we conclude, that a special committee of Congress, in a late Report, have informed us of more individuals and companies already engaged in this enterprise than is generally known, and in some states are companies extensively engaged in raising the mulberry, feeding the Silk Worm, and manufacturing silk goods of a superior quality, and with an encouraging prospect; and their Report speaks decidedly in favor of this cultivation, and urges the propriety of its increase in every state, not only as a profit to those engaged in it, but as a source of wealth to the United States which will add another link to the chain of our independence.

Very little is known in this region about the cultivation of the mulberry or rearing the silk worm. Something has been attempted with the Morus alba (common white mulberry,) but with little or no profit, the cultivators having no faith in the durability of the Morus multicaulis, (Chinese mulberry.)

There has been a prevailing opinion, not only here but elsewhere, that the Morus multicaulis is too tender a tree to endure our northern winters, yet there has been some honorable exceptions to this opinion; and as its history informs us it was introduced into the United States from two different places, we are therefore induced to believe that one kind is hardier than the other, from the fact that the kind we have, endured well the two last winters. We commenced the cultivation of this mulberry in the spring of 1836, with 250 small trees and 1500 cuttings, all Morus multicaulis. The first winter we left 20 trees standing in the open field and unprotected from the weather, and cut down to the ground 34 trees, and covered the stumps with a trifle of straw manure. They all lived and did well. Those we cut down to the ground sent out from their roots, the next spring, an increased number of shoots, some of which, in that season, growed about 7 feet high. The fall after, which was last fall, we cut all our trees down to the ground, and burried the tops in earth till spring for cuttings and layers, in order to increase our trees more rapidly, and we have succeeded this season far beyond our expectations. Our trees will now number about 20,000, and an equal number of cuttings. No tree or shrub that we have been acquainted with is more tenacious of life or easier cultivated or can be more rapidly multiplied than the Morus multicaulis; and we consider the kind we have will endure our winters as well as our forest trees in general under similar circumstances.

It is very desirable that all our farmers should commence the cultivation of the Morus multicaulis without loss of time, and we do think they would if they were more informed with reference to its worth and the ease with which it may be cultivated.

One of the letters accompaning the late Report, says it is no more to cultivate an acre of land with the the mulberry than with corn. If each farmer would devote only 1 acre of land to the Morus multicaulis, it would yield him from 100 to 300 lbs. raw silk a year, in proportion to the fidelity with which the cultivation and feeding is performed; but assuming the lesser quantity (100 lbs. from an acre,) it would yield the cultivator a greater profit than any other product from the soil. If the farmer can be induced to believe these estimates are correct, he will not fail to commence with the Morus multicaulis; and we have estimates of this description so often repeated, and from sources that ought not to be doubted, that we can hardly question but that the farmers will wish to embark in this enterprise if they can know where the best kind of Morus multicaulis can be found. It is truly a scarce article, although many thousands have been imported and hundreds of thousands grown in this country; yet the demand has not been supplied, and it is doubtful whether it will be for some years to come. The more that is known of its worth, the greater is the demand. Although it multiplies rapidly it can not keep pace with the call.

We can spare a few thousand trees and cuttings to those who apply first, and if any of your numerous subscribers wish a few 100 of each, the sooner they let us know it the more sure they may be of accommodation. We have multiplied them so fast that we will afford them considerably lower than we had to pay when we purchased in 1836.

A writer in the Farmer and Gardener advises, as the result of experience. to purchase the mulberry in the fall of the year. He says that this mulberry is so tenacious of life that if it is kept through the fall and winter buried in the ground to the depth of nine or 12 inches below the surface, it will be just as fresh in the spring as when first taken up out of the ground, and then his trees or cuttings are on hand and he can have the benefit of the earlier season of growing without that danger of delay others have suffered who put off their purchase until the spring of the year. Our experience confirms us in the above opinion.

We have fed a few worms every year since we commenced the cultivation of the mulberry, and have not discovered any necessity for the use of the hygrometer or thermometer. We find them to be animals which need food and a rational share of attention and care like other animals, and the better they are attended to, the better will be the result. Our second crop this year are now winding their cocoons in very good order.

Yours, with respect, S. E. Gibbs & Son.

Troy, Sept. 17th, 1838.

PREPARATION OF SEED WHEAT.

Mr. Tucker—It may not be amiss to give the readers of the Genesee Farmer a statement of the way and manner I prepared my seed wheat. The fallow ground was in good condition to receive the seed. I procured some unslacked lime from the kiln, having tubs at hand sufficient to hold the wheat to be limed; put enough water in each to cover the wheat, and then put in lime enough to settle a little at the bottom of the tubs, and immediately put in the wheat, stirring it a little togother, and let it stand over night in the lime water. In the morning turned the whole together on the floor, and sprinkled over it enough of the unslacked lime to make it sufficiently dry for sowing and stirred it well together, sowed it immediately and dragged it in. Including one half the fallow ground by a furrow being made across the ground, and at the same time sowed the remainder of the ground with the same kind of seed except being limed, and fallow ground all alike as to goodness. The wheat from the seed prepared in brine grew remarkably well in the fall and spring, much more so than the other; and on harvesting the acre, that that grew from seed unprepared was so destroyed by the insects as to be barely worth harvesting; on the contrary, that that was limed afforded a a large growth of straw and an extraordinary yield of wheat.

A Practical Farmer.

Berkshire Pigs.—(Fig. 49.)

Mr. Tucker—As I have been called on from several persons in your vicinity by letter, for a description of, and the *peculiar qualities* and *excellence* of the Berkshire breed of swine, I have concluded to answer them, should it be agreeable to you, through the medium of the Genesee Farmer.

The excellence of the Berkshire breed of hogs, consists in *early maturity—may be fattened at any age—quick feeders—very prolific—good nurses—returning a greater quantity* of *flesh* for the *amount* of *food consumed, superior quality* of *pork* and *larger hams* in proportion to the *carcass*, than any other breed I am acquainted with.

Loudon in his "Encyclopedia of Agriculture," says "they are excellent to cross with the slow-feeding sorts, is the sort mostly fattened at the distilleries, feeds to a great weight, is good either for pork or bacon, and is supposed by many, as the most hardy, both in respect to their nature and the food in which they are fed."

They are distinguishable by their color, being invariably black, with white spots, and no bristles—ears of medium size, thin and very little hair on them—long and round in the body—broad on the back—heavy in the fore quarter—heads of medium size, and when in low condition appear rather coarse—legs not large, but of suitable size to support them when fattened. They will improve any breed by crossing.

In this country the pigs have been in such great demand, very few have been fed. Some have been made to attain from 300 to 550 lbs. A sow that got injured in the back, was slaughtered, and when dressed weighed nearly 550 lbs. In England they have been made to weigh from six, seven, and in one instance 904 lbs.

Respectfully yours, C. N. Bement.

Three Hills Farm, Albany, May 20th, 1838.

MAKING SALT.

Mr. Tucker—In looking over the Geological Reports made at the last session of the Legislature, I was particularly interested in that part of the Survey prepared by Dr. Beck, and relating principally to the mineral springs of the State. Perhaps there is no part of these reports that relate to a subject of greater interest to the public than part of Dr. Beck's article in which he refers to the Salt Springs of Onondaga, their history, and prospects. Contributing no small part of the revenue of the State; furnishing a substance indispensable to all, and particularly necessary to the farmer for the use of his flocks and herds, it is not surprising that every suggestion relating to them should be regarded with interest by every citizen of the State.

That coal will not be found in this state in any quantity is now generally admitted; and a resort to the coal mines of Pennsylvania for the means of evaporating would seem to be altogether too expensive. Our noble forests are wasting away under the axe of the woodman, and no efforts are mak-

ing to repair the loss; it seems clear, therefore, that as a matter of necessity and policy, measures should be adopted to procure water of the greatest strength, or the rock salt if possible, and experiments in hastening and facilitating the process of evaporation be made at the expense of the state. Both these subjects are ably touched in the report of Dr. Beck, and were enforced by the legislative committee appointed on that subject at the last session.

It is well known that salt made by any slow evaporating process is of a far better quality than that made by boiling, as the impurities have time to separate, and leave nothing more than the crystals of salt; and even if by a first process of gradual evaporation the brine should only be made of double its present strength, the remainder of the boiling process would be much shortened and the quality of the salt improved. The water of the Onondaga Springs is the strongest in the United States, averaging 14 or 15 per cent., (though Prof. Rogers *imagines* some of the springs on the Holston reach as high as 22) and any process which should double the strength of this brine, without incurring too great expense would, it is evident, be of the greatest consequence to the public.

In Europe, where the brine is very weak, different methods are made use of to hasten evaporation, some of which are alluded to by Dr. Beck; but he only alludes to them, and perhaps you may think the matter of sufficient consequence to give the following short extract from Bakewell's travels, in which the processes are more fully explained, and the practicability of greatly increasing the strength in some similar way, demonstrated.

The salt works in the valley of the Isere, are, according to Mr. Bakewell, the best conducted of any other works in Europe; and this economy is somewhat necessary, as several million pounds of salt are here made from water that in other places would only have attracted notice for medicinal purposes.

"The springs that supply the works near Motiere, rise at the bottom of a nearly perpendicular rock of limestone, situated on the south side of a valley or gorge. The temperature of the strongest spring is 99° of Fahrenheit, and it contains 1.83 per cent. of saline matter. It may seem extraordinary that the waters of Montiers which have only half the strength of sea water, should repay the expense of evaporation; but the process by which it is effected is both simple and ingenious, and might be introduced in other places with great advantage. It is obvious that water so weakly impregnated as to contain only one pound and a half of salt, in thirteen gallons of water could not repay the expense of evaporating by *fuel* in any country. The water of the North sea contains 2¼ per cent of salt, and yet it has never been attempted to make salt from it by evaporation with coal fires, though on the coast of Northumberland or Durham refuse coal might be readily obtained in any quantities for from 30 to 40 cents a ton. In order to make salt from the water at Montiers, it was necessary to concentrate it by natural evaporation; and to effect this as rapidly as possible, it was required to spread the fluid over as large a surface and as thinly as practicable, the ratio of evaporation being *cateribus paribus* in proportion to the extent of surface exposed to the atmosphere. The first attempt was made at Montiers, by arranging pyramids of rye straw in open galleries, and letting the water trickle through the straw gradually and repeatedly. This was soon abandoned, and faggots of thorns were substituted: these faggots are suspended on frames in elevated buildings; the water is raised to the highest part, and then spread by channels so as to trickle through them to the reservoir below. It passes through three sets of thorn faggots, and has then become so concentrated, as to contain nearly 22 per cent. of salt. A slight boiling in the usual manner completes the process, and gives salt of a beautiful quality. There is another method practiced which is found to succeed even better than the mode by the thorn faggots; and that is, by evaporating the water on vertical cords, suspended thickly in a house open on all sides, so as to allow a free circulation of the air. The water, by repeatedly passing over the cords, is found in forty-five days to deposit all its salt upon them, and a cylinder of salt is formed on each cord which is then broken off from the cord and is ready for use or for sale. The cords on an average will last twenty-five years; the faggots must be renewed once in seven years."

Such is the simple process described by Bakewell, and if millions of pounds can be made by evaporating in this way water that contains less than two per cent. of salt, I cannot see why the same labor and the same methods might not make millions of bushels where water was at the standard of the Onondaga Springs. All the philosophy of the matter appears to lie in exposing the brine to atmospheric action, in the thinnest film possible. Evaporation only takes place on the surface exposed, and by multiplying that surface, we add to the rapidly of the evaporation in the same proportion. Thus if the brine in one of the vats at Syracuse was spread over a thousand times the surface, the evaporation, under the same circumstances, would be a thousand times more rapid; and this spreading out, or multiplication of surface is accomplished by the thorns or the ropes. We think some experiments on these methods should be made at the expense of the State, before the scarcity of wood shall compel a reduction in the production of this indispensable article.

NEW-YORK.

SOILS.

MR. TUCKER—I have read with considerable interest, the papers on soils, that have appeared in the current volume of the Farmer, particularly those from Mr. Allen and 'Holkham.' I am glad the subject has been introduced, for the nature of soils is but little understood; and this discussion has shown that earths and soils very differently constituted go by the same name in different places, and unless I am mistaken some words have been wasted by there not being sufficient attention paid to this fact. Would it not be well if in all writings of this nature the proper distinction between *earths* and *soils*, should be kept steadily in view. According to Chaptal, Loudon and others, *earths* are formed from disintegrated rocks, and therefore resemble in their qualities the rocks from which they have been formed. *Soils*, on the other hand, are those earths which have become mixed with vegetable or animal matter in a state of decomposition; and therefore on lands not cultivated usually form a thin strata of a few inches on the surface, while on lands cultivated, soil is gradually formed to the depth to which it is generally cultivated, or stirred. The depth of the soil, however, on uncultivated lands, differs much according to the nature of the earths from which it is formed; and the deepest soils are of course found in those places where the earth is of such a nature that the decomposed matter penetrates readily from the surface.

If these premises are correct, is it exactly proper to term a soil a hard-pan soil, when the hard-pan, or the retentive subsoil, does not approach within sixteen or twenty-four inches of the surface? It is clear the retentive earth in this case is not a soil. It is not exposed to surface action; it contains little or no vegetable and animal matter; it has not been moved by the process of cultivation; in short, it has not one of the marks that go to constitute soil, and should, in strict phraseology, be ranked with the earths alone. It matters not in this case of what the retentive stratum is composed; whether clay, or sand, or pebbles, or lime, the result is the same; the hard-pan at this depth is not a soil, it is simply retentive earth.

But if this retentive earth, or hard-pan, approaches the surface so as to be exposed to atmospheric and other agencies; if it is operated upon by the plough in the processes of cultivation, whatever may be the constituents of this retentive earth originally, it is now a hard-pan soil, and can be operated upon, and modified according to the pleasure of the cultivator. I think the Genesee Farmer itself has sometimes erred on this point as well as its correspondents; and such is the common practice of speaking on this topic, that it is difficult for any one to avoid slips of this kind.

It is evident the facility with which a hard-pan soil can be modified, or cultivated profitably, must depend greatly or altogether on the nature of the earths that originally composed it. The presence of clay seems necessary in a greater or less degree to constitute hard-pan, and the conversion into soil, will be more difficult where this earth abounds, than where siliceous or calcareous earth predominates. Where the retentive earth is a foot and a half or two feet below the surface, it can rarely produce injury, and in most cases is a decided benefit. Where the retentive earth makes part or the whole of the soil, and where it is obliged to plant, or sow, or plough, in such a soil, it is found to be one of the most serious impediments to easy and profitable agriculture.

COKE.

INQUIRY FOR HORSE POWER, &c.

MR. L. TUCKER—I lately subscribed to your paper the Monthly Farmer, and rejoice that I have done so, because it will aid me very much in a business I have lately undertaken, though under great disadvantages, having purchased a small farm of only 83 or 4 acres of land, which I wish to make support a family of 10 or 12 members—you will say at once that it ought to support 30 or 40, and if I had the energy or intelligence of your *useful* subscribers it might do so. I sowed last fall about eight bushels of wheat in a small apple orchard, the trees old and dying of about 4 acres, never having manured it; though the richest ground I have, and the produce was 64 bushels clean wheat, 59½ lbs. to the bushel: how very small the amount to what it might have been had it not been for the bad culture and exhaustion to which the land had been previously subjected.

Now, sir, I intend to lime and sow 4 other acres this fall—see what it will produce, and will let you hear from me, God willing, when sold and delivered next July. One great inconvenience a small farmer labors under is in implements of husbandry. I proposed to a machinist to make me a wheat threshing machine and Horse power, and he charged me $250 first, and said finally that he would make one for $200, as my farm was a small one and work would be dull during the winter. Now, sir, my farm cannot bear so heavy an expense as the last of these sums; and my purpose in writing to you is to know whether I can get a light one or two horse power machine, and all complete, that would answer for threshing wheat, rye, oats and clover, and at what price delivered to James Fisher jun. at Richmond, (Va.) and landed at my landing at Warwick on James' River, about five miles below Richmond. Perhaps if you would describe one in a No. of the Farmer and state its price many might be sold in my neighborhood. I at least want one. I am surprised to read of uncommon crops of roots that are produced in your state, and but for the utter hopelessness of the case would attempt the crop on my place—seeing that beets, carrots and turneps, sown in my land, are so very small as to be fit for nothing.

My land is a hard white clay soil, fit for nothing but to plough, manure, roll, harrow, and repeat again, in rapid succession for 12 months, to get it fit for the culture of roots. Lime may work a wonderful cure in it its soil or may not—I feel disposed to try its effects.

Respectfully, C. ROBERTS.

Richmond, Va., Sept. 20, 1838.

[☞ As we are unable to give the writer of the above the information he desires, we publish his communication, and shall insert with pleasure any information its publication may be the means of eliciting.]

INQUIRIES.

CANADA THISTLES—Sir: Will not salt, applied in sufficient quantity, effectually destroy the Canada Thistle? If so, please state the probable amount requisite for an acre. Also the benefit of lime for land thus salted to resume its natural fertility. An answer in the Monthly Farmer is respectfully requested.

Yours, &c. S. W.

BEET SUGAR.—I have a fine crop of the Sugar Beet, and wish you, Mr. Editor, or some of the readers of the Farmer, would tell me how to make it into sugar. Has there been any easier way discovered of doing it, than that described in Pedder's Report; and if so, what is it? Any information on this subject will be useful to very many of your subscribers.

I. T.

A PROLIFC POTATO.—We learn from the Claremont N. H. Eagle, that Mr. Ellis of West Claremont, has a potato patch of thirty feet square, the vines of which measure one mile in length, the product of but *one single potato which he planted in the middle of May last!* It was a large one of the lady finger species, and had seventy-two eyes.—*Yankee Farmer.*

FLEMISH HUSBANDRY.

The poor sandy heaths, which have been converted into productive farms, evince the indefatigable industry and perseverance of the Flemings. They seem to want nothing but a space to work upon; whatever be the quality or texture of the soil, in time they will make it produce something. The sand in the Campine can be compared to nothing but the sands on the sea shore, which they probably were originally. It is highly interesting to follow, step by step, the progress of improvement. Here you see a cottage and rude cow-shed erected on a spot of the most unpromising aspect. The loose white sand blown into irregular mounds is only kept together by the roots of the heath: a small spot only is levelled and surrounded by a ditch; part of this is covered with young broom, part is planted with potatoes, and perhaps a small patch of diminutive clover may show itself: but there is a heap of dung and compost forming. The urine of the cow is collected in a small tank, or perhaps in a cask sunk in the earth; and this is the nucleus from which, in a few years a little farm will spread around.

In another spot more extensive improvements are going on: a wealthy proprietor or lessee is trenching and leveling the surface, sowing broom-seed, and planting young fir trees, which are to be cut down in a few years. In another, the process has gone on further, the firs or the broom are already cut down: a vein of loam has been found, and is dug out to be spread over the sandy surface: the cart with liquid manure is preparing the surface for the reception of seed, or the same, diluted with water, is poured over the young blade just appearing above ground. The soil is created, and, if the cost and labor were reckoned, is paid for at a dear rate: but perseverance insures success, and there are few instances of improvements being abandoned, after they are fairly begun, unless they were undertaken on too large a scale; but then the land is soon divided into smaller portions, and improvements go on from different centres, and with more certainty.

We are here describing the labor of bringing a soil absolutely barren into a state of cultivation; but in most of the districts which have been originally waste and covered with heath, and which are now fertilized, a less ungrateful soil was found. Deep trenching and levelling at once presented a surface which required only to be manured to produce rye, flax, and potatoes. This is what we should call a moderately good sand, in which a small portion of clay and oxide of iron produces a certain degree of compactness so as at least to retain moisture: under this kind of sand a stratum of loam is usually found at the depth of two or three feet, and, almost invariably between the sand and the loam, an indurated crust of earth cemented by carbonate of iron, which is well known to all improvers of poor sands by the name of the *iron pan;* this pan must be broken up and the loam under it mixed with the sandy surface, before any cultivation can succeed; and in this operation the Flemings are very dexterous. The instrument they use is a light wooden trenching spade, the end of the blade only being shod with iron: the handle of this spade is about two feet long, the blade from twelve to fifteen inches. A light pick-axe is used to break the pan where it appears. A ditch is dug with the trenching spade two or three feet wide, and as deep as the trenching is intended, generally two feet, or at least twenty inches; this ditch is filled with the earth which is taken in long thin slices from the edge of the solid side of the ditch. Every slice is distributed carefully, so as to mix the whole, and keep the best soil at top, and likewise to fill up hollows and level eminences. If there is more than can conveniently be spread level, little heaps are made of the superfluous earth, which are afterwards carried, in an ingenious manner, to fill up more distant hollows, by means of horses and an instrument which is called a *mollebart*. Wherever there is a pan, it is carefully broken, and the loam, which is always found under it, is mixed with the sand dug out. Draining is seldom required here except that which is effected by making deep ditches to carry off the superfluous rainwater, which, in a country almost as level as a lake, is no great difficulty. A canal near at hand is, however, an essential condition of extensive improvement, to bring manure, and carry off the produce of the land, as well as to be an outlet for the water in the ditches. When Count Chaptal traversed a barren part of Flanders, accompanying the Emperor Napoleon, the latter expressed his surprise, at a meeting of the Council of the Department, that so great a tract of land remained uncultivated in so industrious a nation. The answer was, 'If your majesty will order a canal to be made through this district, we pledge ourselves that in five years it will be all converted into fertile fields.' The canal was ordered to be made without delay, and in less time than they promised not an unproductive spot remained.—(See Chaptal, 'Chimie Appliquee a l' Agriculture,' vol. i. p. 347.)—One great cause of the agricultural prosperity of Flanders is the ready transportation of manure and produce by canals. But to return to the new trenched land. If there is no manure at hand, the only thing that can be sown on poor sand, at first, is broom: this grows in the most barren soils; in three years it is fit to cut, and produces some return in fagots for the bakers and brickmakers. The leaves which have fallen have somewhat enriched the soil and the fibres of the roots have given a certain degree of compactness. It may now be ploughed and sown with buckwheat, or even with rye without manure. By the time this is reaped some manure may have been collected, and a regular course of cropping may begin. As soon as clover and potatoes enable the farmer to keep cows and make manure, the improvement goes on rapidly; in a few years the soil undergoes a complete change: it becomes mellow and retentive of moisture, and enriched by the vegetable matter afforded by the decomposition of the roots of clover and other plants. It is surprising that so few sheep should be kept on these new farms. Sheep folded would do good by their tread, as well as their manure, but the management and feeding of sheep is a part of husbandry in which the Flemings, with very few exceptions, are decidedly as much behind our light land farmers, as they are before us in the feeding of their cows, and preparation and economy of manure.

If about twenty small cart-loads of dung can be brought on each acre of the newly trenched ground, the progress is much more rapid. Potatoes are then the first crop, and generally give a good return. The same quantity of dung is required for the next crop, which is rye, in which clover is sown in the succeeding spring; and a small portion is sown with carrots, of which they have a white sort, which is very productive and large in good ground, and which, even in this poor soil, gives a tolerable supply of food to the cows in winter. Should the clover fail, which sometimes happens, the ground is ploughed in spring and sowed with oats and clover again. But if the clover comes up well amongst the rye stubble, it is cut twice, after having been dressed with Dutch ashes early in spring. It is mostly consumed in the green state.—The clover-ley is manured with ten cart loads of dung to the acre, and rye sown again, but not clover. After the rye comes buckwheat without any manure; then potatoes again, manured as at first, and the same rotation of crops follows. It is found that the poor land gradually improves at each rotation from the quantity of dung used: and, as this is essential, it will be easily seen that without water carriage the improvement could not go on; for the necessary quantity of dung could never be brought to the ground by hand carriage through the deep sandy roads, which are mere tracks.

For want of sufficient manure, broom-seed is sometimes sown with the rye after the clover. The rye is reaped and the broom continues in the ground two years longer. It is then cut for fuel. The green tops are sometimes used for litter for the cows, and thus converted into manure. It is also occasionally ploughed in, when young and green to enrich the land. Oats, clover, and broom are occasionally sown together. The oats are reaped the first year; the clover and young broom tops the next, and the broom cut in the third. This is a curious practice, and its advantage appears rather problematical. All these various methods of bringing poor sands into cultivation show that no device is omitted, which ingenuity can suggest, to supply the want of manure.

After the land has been gradually brought into a good state, and is cultivated in a regular manner, there appears much less difference between the soils which have been originally good, and those which have been made so by labor and industry. At least the crops in both appear more nearly alike at harvest, than is the case in soils of different qualities in other countries. This is a great proof of the excellency of the Flemish system; for it shows that the land is in a constant state of improvement, and that the deficiency of the soil is compensated by greater attention to tillage and manuring; especially the latter. The maxim of the Flemish farmer is, that 'without manure there is no corn—without cattle there is no manure—and without green crops and roots cattle cannot be kept.'—Every farmer calculates how much manure he requires for his land every year. If it can be bought at a reasonable rate, he never grudges the outlay. If it cannot be purchased, it must be made on the farm. A portion of land must be devoted to feed stock, which will make sufficient manure for the remainder: for he thinks it better to keep half the farm only in productive crops well manured, than double the amount of acres sown on badly prepared land. Hence also he does not reckon what the value would be of the food given to the cattle, if sold in the market, but how much labor it costs him to raise it, and what will be the increase of his crops from the manure collected. The land is never allowed to be idle, so long as the season will permit anything to grow. If it is not stirred by the plough and harrow to clear it of weeds, some useful crop or other is growing in it. Hence the practice of sowing different seeds amongst growing crops, such as clover and carrots amongst corn or flax; and those which grow rapidly between the reaping of one crop and the sowing of another, such as spurrey or turneps, immediately after the rye is cut, to be taken off before wheat sowing. These crops seem sometimes scarcely worth the labor of ploughing and sowing; but the ploughing is useful to the next crop, so that the seed and sowing are the only expense; and while a useful crop is growing, weeds are kept down. These are the general principles of Flemish husbandry.

The collection and application of manure is the great secret of Flemish husbandry. Upon their poor light soils nothing could be raised without an abundance of manure. It is consequently, an object of minute attention to the Flemish farmer to collect as much as possible, and to apply it in the most advantageous manner. For this purpose the dung of the different domestic animals is generally kept separate, especially that of cows, from that of horses; the former being thought better for dry sandy soils, the latter for colder loams and clays. They look upon pigs' dung as being cold and inferior, adopting in this respect the opinions of the ancients. We think differently; but this may be easily accounted for. The Flemish store pigs are fed in the most miserable manner, and are merely kept alive on weeds taken from the fields, or by very scanty grazing in rough pastures. We need not be surprised, therefore, that their dung is poor. The cows are better fed, and their dung is constantly richer. Cow dung is thought to last longer in the soil, and its effects on the second crop are more conspicuous than that of horse dung, which stimulates more and is sooner effete. Sheep, which are so important to the light land farmer in England and Scotland, for their manure, are not kept in sufficient quantities in Flanders, nor well enough fed to do much good to the land. They are commonly housed every night, and driven about in the day to gain a scanty subsistence along the roads and sides of fields. The manure collected in the sheep-fold is carried out on the land, and its effects are duly appreciated. A flock is occasionally folded on a clover ley before it is ploughed up, but never on turneps, which are always given to the cows. This is owing to the small extent of the farms, which do not allow of a considerable flock of sheep being kept by any one farmer; but a flock is made up of different lots of sheep belonging to several proprietors, and put under the care of a common shepherd, or it is sometimes the property of the shepherd, who occupies no land, but lets out the sheep to fold, or sell the manure.

But the great auxiliary of the Flemish farmer is the URINE TANK, wherein are collected not only the urine of cows and horses, but also the drainings of the dunghills. The urine tanks are generally sunk below the level of the ground, and have the sides built of brick, and the bottom paved: they are of various dimensions, according to the number of cows and horses on the farm. Attached to the distilleries, where many beasts are constantly kept to consume the refuse wash, there are very large urine tanks of an oblong shape, divided by partitions into different chambers, so that the liquor may be of the proper age when it is used, which some farmers think ought to be six months. Each chamber is about eight feet square and six or eight feet deep; these are sometimes vaulted over, but frequently only covered with loose boards. As urine and the emptyings of privies are sold wholesale and retail, there are many large tanks near the rivers and canals, where the dealers have sometimes great quantities in store. Some of these consist of many square pits like tan pits, bricked round, and the inside covered with a cement, which prevents loss by filtration. There is generally in a corner of each pit a graduated scale, by which the number of barrels, or tons of liquid in the tank may be ascertained by observing the heigth of the surface. These tanks are gradually filled by boatloads brought from the large towns; and when the season arrives for sowing, in spring and autumn, the farmers come with their carts and tubs, and purchase as much as they may want. The price varies from three to five francs (fifty-six to ninety-four cents) per hogshead according to their quality. In a small farm of thirty to forty acres the tank is generally about twenty feet long, twelve wide, and six deep, with a partition in the middle, and arched over, leaving an opening for the pump, and another sufficient to allow a man to go in to empty out the earthy deposit which falls to the bottom. A trapdoor shuts over this aperture to prevent accidents. Sometimes the tank is round, like a well, with a domed top, and so deep in the ground, that it has a foot or two of earth over it. The situation of the tank is either in the farmyard near the entrance of the cowhouse, or immediately behind it; sometimes it is like a cellar under the building; but this is apt to cause a disagreeable smell in the cowhouse.—We here describe those which we consider the most convenient: the form and capacity of the tanks vary according to the means and notions of the proprietors of the farms: but a tank of some kind or other is considered as indispensible an appendange to a farm as a barn or cowhouse. The farmer would as soon think of dispensing with his plough as with his tank: and no expense or trouble is spared to keep this well supplied. The numerous towns and villages in Flanders afford great help in the way of manure. The thrifty housewife and her active substitute the maid, know the value of what in our households is thrown away or wasted, and lost. A small tank, or a tub sunk in the ground in some corner contains all the liquid which can in any way be useful; soapsuds,

washing of dishes, &c., are carefully kept in this reservoir, until once a week, the farmer or contractor calls with his tub on a cart, and this, mixed with the contents of privies, which are frequently emptied, he keeps in large cisterns for use or sale.

But this supply is not always adequate to the wants of the farmer, and then he has recourse to rape cakes dissolved in water, or in the tank, which is expensive, and can only be profitable where flax bears a good price, this being the crop for which rake cakes are chiefly used as manure. Every means, therefore, of augmenting the supply of urine is had recourse to, and the most efficacious is the establishment of distilleries. These answer the double purpose of consuming produce and increasing manure by the number of beasts which are fattened on the refuse wash. It is calculated that every beast produces at the rate of ten or twelve tons of dung and twenty-six hogsheads of urine in the year. A moderate distillery has fifty or sixty head of cattle constantly stalled. Here then is a supply of manure for several hundred acres of land every year. Formerly there were a great many distilleries in Flanders, but the duty on spirits and the interference of the government has much reduced their number; so that the farmers complain of the loss of this manure, and the consequent deficiency of their crops.

The dung of pigeons and domestic fowls, where it can be collected in any quantity, is highly valued. The mode of using it is either in a dry and powdered state, to which it is reduced by thrashing with a flail, when it is sown with the seeds of leguminous plants, or else dissolved in the urine tank, and thus spread over the land. This manure is chiefly reserved for kitchen gardens; it promotes the growth of vegetables and produces no weeds.

The solid dung, from which the liquid has been allowed to run off into the tank, must be carefully attended to, that it may not be too dry and become *foxy*, as it is called, or burn. It is therefore, mixed up with earth and any useless vegetable matter which can be collected into a heap or compost; and when it appears too dry some of the liquid from the tank is poured over it, to excite fermentation and accelerate decomposition, or it is merely watered, when there is sufficient strength in it to produce heat.

In order to increase as much as possible the quantity of solid manure, there is in most farms a place for the general reception of every kind of vegetable matter which can be collected; this is a shallow excavation, of a square or oblong form, of which the bottom has a gentle slope towards one end. It is generally lined on three sides with a wall of brick to keep the earth from falling in, and this wall sometimes rises a foot or more above the level of the ground. In this pit are collected parings of grass sods from the sides of roads and ditches, weeds taken out of the fields or canals, and every kind of refuse from the gardens: all this is occasionally moistened with the washings of the stables, or any other rich liquid; a small portion of dung and urine are added, if necessary, and when it has been accumulating for some time, it is taken out; a portion of lime is added, and the whole is well mixed together; thus it forms the beginning of a heap, which rises gradually, and in due time gives a very good supply of rich vegetable mould, or compost well adapted to every purpose to which manure is applied. The place where this accumulation is made is called in French a *croupissoir*, and in Flemish or Dutch *smoor hoop*, which may be translated *smothering heap*.

Besides the manure which is collected on the farm, the *vidanges*, or emptyings of privies obtained from the towns and the sweeping of streets, a large quantity of peat ashes imported from Holland are used, principally as a dressing for clover. These are the ashes of the common fuel in use in Holland, and are sold in Flanders by the bushel, as the Newbury ashes are in Berkshire.

Wood ashes, after the greater part of the alkali has been extracted for bleaching, are still considered as of great use to the land. Soapers' ashes are in great request for cold heavy soils; and sugar scum from the refiners, if it could be procured in sufficient quantity would be an excellent manure for every kind of soil. Where it can be obtained, they usually throw it into the urine tank; and the mixture is then considered as almost equal to the vidanges, which are looked upon as the *ne plus ultra* of manures. Soot is used as a top-dressing for wheat, or clover in spring, as it is with us. It is thought to destroy insects and hasten vegetation.

The weeds, which grow abundantly in all ponds, canals and ditches in this level country, where the current is never rapid, are mown in spring, and used in the green state as manure for potatoes. They are laid in the furrows, and the sets placed over them; the furrow is then filled up by the plough, and the weeds decomposing very rapidly, greatly assist the growth of the potato plants: so rapidly do these weeds ferment, that much of their value is dissipated, if they are left only forty-eight hours in heaps before they are put into the earth.

The manner in which manure is applied to the land for different crops will be explained as these are separately treated of: but the general principle, which pervades the whole system of manuring, is worthy of attention. Two great objects are always kept in view. The first is to obtain the most abundant crop of whatever is sown: the next is to impregnate the soil with an increasing power of production, if possible, or at least to maintain that which has been obtained. In consequence of this, almost every crop has a certain portion of manure applied to it, which varies according to the nature of the crop to be raised, and that which has preceded: experience having taught that some crops exhaust the soils more than others.

But it is not the mere surface that they desire to manure. They well know that the deeper the soil is fertilized, the greater will be the profit and the less the labor. They are not satisfied with enriching the land to receive the seed, they furnish food for the growing plant in different stages of its growth, if they think it necessary. There is in consequence no fluctuation in the growth, no check at a time when the plants require support. The seed is made to vegetate rapidly by being in contact with the rich juices of the manure; and hence a much smaller proportion of seed is required. The young blade is invigorated by a judicious watering, and is soon out of danger of the attacks of insects.—*Library of Useful Knowledge, Farmers' Series.*

From the Farmers' Cabinet.

Facts and Opinions on Lime.

"Examine all things, and hold fast to that which is good."

The extensive and increasing use of lime for agricultural purposes, renders it highly necessary that farmers should be put in possession of all the leading facts in relation to so important an article; and one in which large numbers of them are dealing annually, some of whom have sustained loss from lack of that kind of knowledge which would enable them to protect their interests.

It has been ascertained from a series of experiments carefully made in England, by Bishop Watson, and it is presumed that they will apply equally well in this country, that upon an average every ton of 2240 lbs. of good limestone produced 1292 lbs. of quick lime, weighed before it was cold; and that when it was exposed to the air it increased in weight daily, at the rate of a hundred weight per ton, for the first five or six days after it was drawn from the kiln.

A ton of fsesh well burnt lime will absorb 680 lbs. or nearly one-third its weight of water without being slacked; and a buushel of good stone lime, when slacked, will measure two bushels; of course slacked lime should sell for one-half the price per bushel of stone lime.

There is a great difference in the value of lime, depending on the purity of the stone out of which it was burnt. Some lime contains one-fourth or more of sand; and often other impurities enter into its composition which materially lessen its value. Masons and bricklayers are among the best judges of lime, for they know that the purer it is, the better it works, and the more sand may be mixed with it. Some lime is so poor, or contains so much foreign matter in its composition, as not to admit of any, or only of a very small quantity of sand being added to it in making mortar. The lime that is most profitable for making mortar, is also most valuable for agricultural purposes. The purer lime is, the more water it takes in, and the longer it is, in slacking, and it increases more, both in weight and measure by the process of being slacked, than poor or impure lime does.

Water dissolves the alkaline ingredient of lime, and it has been ascertained that at the freezing point it dissolves double the quantity that boiling water does, differing in this respect perhaps from all other bodies.

Lime water, or the alkaline solution of lime, is perfectly transparent, and possesses an acrid, alkaline taste, somewhat similar to the ley from wood ashes.

Dr. Alston states that one pound of quick lime furnished him with 600 pounds of lime water without its being sensibly weakened, and that he continued the application of additional quantities of fresh water to it for twenty-six months.

It is presumed that it is this alkaline solution of lime that produces the principal effect on the soil and on vegetation. Lime and its solution are well known to be powerful antiseptics, resisting or impeding putrefaction in animal or vegetable substances, notwithstanding it has been stated in many books of agriculture that it promotes fermentation and putrefaction, and renders bodies more quickly and readily soluble in water.

Qiuck lime applied to succulent vegetables absorbs the moisture from them, and renders them perfectly dry and brittle, and if the quantity of lime be great compared with the vegetable matter, combustion takes place and the vegetables are reduced to ashes, but are not decomposed in the usual understanding of the term.

Lime spread on the surface sod is in some measure prevented by the grass and the fibres of the roots from descending into the earth, and the rains from time to time dissolve it, and carry down the alkaline solution, so as to moisten every particle of the soil with it. This neutralizes the acidity of the soil, and the carbonic acid gas of the atmosphere converts the solution into carbonate of lime in connexion with every particle of earth it comes in contact with, and this being much less adhesive than clay when it comes to be ploughed the particles easily separate, and hence the propriety of lime in rendering the soil less adhesive and more readily penetrated by the roots of plants in search of food.

Particles of sand not being penetrable by moisture, where that predominates, the alkaline solution of the lime passes between them, and hence it renders a sandy soil somewhat more compact and retentive of moisture.

Where much vegetable matter abounds in a soil, it will absorb and retain the solution of lime as a sponge, which being converted in its interstices into a carbonate, will tend to impede its too speedy decomposition; for vegetable matter, in our climate, decomposes with too much rapidity for plants to take up the nutriment it affords as rapidly as it is produced, and consequently a portion of it is lost or dissipated; but by the decomposition being impeded or checked by the carbonate of lime it proceeds more slowly and continues to give out food for plants more gradually and for a much longer period of time; and this corresponds with the observation of our most intelligent farmers, that where lime is used the manure or dung continues to produce its effect for a much longer time.

The partially decomposed vegetable matter in the soil operates as a reservoir for moisture, and gives it out to the adjacent soil when it becomes dry, so as to keep up a more perfect equilibrium of moisture, which is stated to be the fact where lime is applied; for manure that is only partially decomposed holds moisture in much larger quantities than that which is thoroughly rotten. This may be observed in every dung heap in the country, for the straw holds the moisture whilst the decomposition is only partial, but when it becomes thorough it lets it loose, and hence we see the essence of dung heaps running to waste during the summer season.

These views are thrown together for the purpose of arresting the attention of those who are much more competent to discuss this intricate subject than the writer, for we find sometimes that even an erroneous theory by leading to discussion promotes the discovery of truth. It is therefore hoped that those who are disposed to examine and discuss this important subject, will avail themselves of the Farmers' Cabinet for that purpose. X.

Making Manure.

Mr. Holmes—The manure heap is said to be the farmer's mine. It is truly the source of all his treasures.—Were it not for the wonderful economy of nature in converting into vegetables and plants the offal, filth and decayed matter, which is constantly accumulating around us, the ground would be tardy in yielding a supply of its productions for either man or beast. The air would be filled with the pestilential vapor which heaps of filth thus collected would send forth, and disease and death would be the consequence. But in the allwise operations of nature it is differently ordered, and those most offensive substances are made not only useful but absolutely necessary for the use of man. But what I was a going to say is that farmers are not sufficiently cautious to improve all the opportunities within their means to profit by this advantage bestowed upon them by dame nature. They are many farmers, *yes*, a great portion of the farmers in our state about whose premises may be found the materials for large quantities of the very best manure untouched and apparently unnoticed. There are many farmers within my knowledge who manage their pecuniary affairs to the exactness of half a cent—who would shrink from the idea of seeing a crumb of bread or an ounce of meat wasted in the house—who glean the field with care that not a straw of grain or lock of hay be wasted, who are criminally slovenly and negligent in collecting the materials for making manures which are every day being thrown from the house and in other ways accumulating ground them. Thus leaving them upon the top of the around not only to be wasted but to generate unwholesome gases which are the seeds of nearly all the diseases with which a temperate man is afflicted.

Farmer B. was once guilty in this respect, but now he is a fit pattern of economy in this respect. He is one of your close fisted snug men that never lost a cent in his life, and supposed that he made every thing count, until one day a friend called at his house, and after walking round his premises asked him how long he had lived there. "Ten years," said B.

"You have lost during that time two hundred dollars," said the other. Impossible said B., I never lost a single dollar." "I should said, perhaps, that you might have made two hundred dollars more than you have made from this farm during that time." "How," inquired B. eagerly. By collecting yonder pile of old bones and the heap of old ashes and rubbish, and saving all the soap suds and other slops that go from the house, and converting them into manure," was the reply. B. for the last five years has been cautious that not a particle of manure should be lost, and a short time since he told me that he had not the least doubt that the suggestion made by his friend had added fifty dollars a year to his crops.

Let others try the experiment, and no reasonable doubt can exist, but they will meet with similar success. J. H.

China, Aug. 28, 1838. [*Maine Farmer.*

Under Beds.

Would you have good under beds, constituted of materials that will endure? Then give up the old notion of filling them with straw, which soon becomes worn down to chaff, and requires replenishing once or twice a year,—and, if you have not corn of your own, go to some neighbor's husking, and preserve the inner husks of the corn for this purpose. The outer husks are a little too stiff; but the inner ones are soft and elastic when dried, and when once you have obtained enough of them to fill the bed sack, dismiss all trouble about that bed for years,—for it will last probably as long as you live. It is quite an object for a family to have all their beds filled in this manner.—*Yankee Farmer.*

MACKEREL.—Our "oldest fishermen" have never known the season when *fat* mackerel were so plenty about our shores as they have been for a week or two past. On Sunday last (in these times people fish on Sundays) at least one hundred and fifty barrels were taken off the shore opposite Eastern point, by wherries and a few larger crafts—and for the size and fatness, the samples which came under our observation were altogether superior to any we had ever before seen. One of these beauties was exhibited by a gentleman, which weighed upwards of *three pounds*, and the fat upon him measured an inch in thickness!—*Gloucester Telegraph.*

Berkshire Pigs for Sale.

THE subscriber has several pair of the above breed of pigs unengaged, that were dropped the present week and will be ready for delivery the last of October.

Buffalo, Sept. 22, 1838.–w3tm1t A. B. ALLEN.

SOUTH DOWN SHEEP.

THOSE who are interested in the breeds of sheep are respectfully invited to call and see the breed of South Downs, imported by JAMES PARSONS of Riga, Monroe Co. Those sheep are the pride of the English farmer, and are well known to be that kind of sheep which alone are superior to any other now raised in England. The make and form of the South Down sheep render them the objects of admiration by all who have seen them.

It is now five years since I have had them in this country, and such is the favor by which they have been received by those who have experimented in the cross of the South Down buck with the Saxony and Merino ewe that any further praise in their favor is needless.

Those who delight to improve their own stock of sheep and are anxious to do so, may apply to the following persons for information respecting the cross of the South Down with the sheep of this country, all of whom have experimented in the cross.

Monroe County.

Isaac Lacey Esq.,	Chili.	Mr. Vangeeson,	Clarkson.
Elisha Sheldon,	do.	Guy Chappell,	Sweden.
E. Blackmore,	Wheatland.	James Lush,	Ogden.
Calvin Armstrong,	do.	Willian Church,	Riga.
William Legget,	Henrietta.	William Brodie,	do.
Stephen Legget,	do.	James Loder,	do.
Mr. Schank,	Brighton.	Henry Davis,	do.
John Moxon,	Greece.	Samuel C. Baldwin,	do.
John Pringle,	do.	Mr. Vangeeson,	do.
John G. Crandell,	Clarkson.	Thomas Adams,	do.

Jeptha Wilber,	Avon,	Livingston Co.	
Josiah Smith,	Genoa,	Cayuga	do.
Worthington Smith,	do.	do.	do.
Silas Tucker,	Seneca,	Ontario	do.
George G. Holdridge,	Ossian	Allegany	do.
Ralph Fitch,	do.	do.	do.
S. Strong Esq.,	Owego,	Tioga	do.
John P. Wilson,	do.	do.	do.
William Kingham,	Springfield,	Clark Co.	Ohio.
Remus Payne,	Locust Grove,	Kentucky.	

Should I not dispose of that portion of my bucks which I hold for sale by private sale, it is my intention to sell the remainder at auction in the city of Rochester, of which sale notice will be given at a future period, but those wishing to purchase cannot do better than to call at the residence of the subscriber in Riga, Monroe Co. and see the whole Flock of bucks and ewes and lambs; they can then take their choice of those for sale. I shall continue to have for sale yearly some of the above blooded sheep, which for pureness cannot be excelled by any in the country from whence they came. A certificate will be given with the pedigree for each sheep sold. JAMES PARSONS.

September 29, 1838.–w3tm1t

SHEEP.

FOR SALE, at a bargain, to close a concern, a small flock of pure old fashioned Merino Ewes; also, a few pure Bakewell Ewes, and a mixed flock of South Down, Merino, and Bakewell.

Buffalo, Sept. 1, 1838.–w4m1 A. B. ALLEN.

A Farm for Sale.

THE subscriber, offers for sale a farm, containing one hundred and sixty-six acres of choice land. One hundred and twenty-five under improvement, and the most of it first rate grain land, situated at Hanover centre, in the county of Chautauque, two miles from Silver Creek Harbor, three from La Grange, four from Irving Harbor, and four from Farrestville.

There are upon the premises, two dwelling houses, one of them a large two story building, with commodious out buildings, orcharding, &c.

This farm is pleasantly situated, the soil of a superior quality, and is considered by competent judges, one of the most desirable farms in the county.

For terms, apply to David Seymour, on the premises, or to the subscriber at Lodi, Erie county.

JOSEPH PLUMB.

September 15th, 1838.–w8m2

Sale of Impoved New Leicester Sheep.

40 EWES and RAMS of this celebrated breed will be *Sold by Auction* at the old Norton Farm, East Bloomfield, 5 miles west of Canandaigua, Ontario Co. N. Y., on Wednesday, the 17th of October next; some of which are of those imported in 1834, and the remainder from the said stock breed upon the farm of their present owner: by whom the former were selected from the flocks of the most ancient breeders in England. They will be sold without reserve, either singly or in such lots as purchasers may wish. Liberal credit will be given on approved notes or good security.

September 1, 1838. THOMAS WEDDLE.

SAXONY SHEEP FOR SALE.

40 RAMS & 60 Ewes of the pure Electoral Saxon Race. The subscriber imported 100 yearling Ewes and a number of Rams in 1827 which were selected by himself from the purest race in Saxony, and with which he commenced his flock, and not only mantained them in all their purity of blood, but improved them in size, symmetry of form, and quantity and quality of wool. The above number of Ewes will either be sold or let for a term of years, and can be increased to 75 or 80 if desired.

H. D. GROVE,

Buskirks Bridge Post Office, Washington Co. N.Y.

August 25, 1838–3m*

MULBERRY TREES.

200,000 GENUINE Mulberry Trees, and as many more as may be wanted, of the most approved kinds—consisting of the best selected varieties now in use for cultivation, feeding worms, and making silk; being acclimated to this country, and adapted to either warm or cold climates, affording a rare opportunity for Companies or individuals to be supplied, from the most extensive collection of Mulberry trees ever seen in any village within the United States.

Autumn is decidedly the best time for removal, and orders left with

Messrs. I. B. Colt, Sec'y of the Connecticut Silk Manufacturing Company, Hartford; Alonzo Wakeman, at the office of the American Institute, No. 187 Broadway, N. Y.; Thomas Lloyd, Jr. No. 236 Filbert street, Philadelphia, Pa.; Luther I. Cox, Baltimore, Md.; B. Snider & Co. Savannah, Ga; Bliss, Jenkins & Co. Mobile, Al.; James Lyman, St. Louis, Mo.; Case & Judd, Columbus, O.; G. Harwood, Rochester, N. Y.; and the publishers of this advertisement, or with the subscriber, in Northampton, Mass.

Orders left with the above gentlemen will be promptly attended to, and each will be furnished with samples of the foliage.

Several valuable farms may be had with or without Mulberry Plantations. Apply at the office of

D. STEBBINS.

Notrhampton, Sept. 1, 1838.–10t*

Silk Business.

PERSONS who intend doing an extensive business next year with the Mulberries, can be supplied with the *true genuine Morus multicaulis* trees and cuttings, by sending in their orders early. Companies that wish to contract for large quantities, can be supplied on reasonable terms. The trees are to be well packed, so as to be sent to any part of the United States, and delivered this fall. The subscriber has been extensively engaged in the culture of silk for some years, particularly to the production of the Morus multicaulis; and will be hapyy to give any information respecting the tree or feeding the worm that may be required—silk, worm eggs, &c.

All letters will meet with immediate attention if assingned to EDWARD H. ARNOLD.

Burlington, New Jersey.

N. B. As orders are coming in now, it would be well for those in want to apply early. Aug. 1838.–3m*

Silk Worms Eggs.

WE can furnish any quantity of Silk Worms Eggs, of the white or two crop variety.

Rochester, July 28. REYNOLDS & BATEHAM.

Stones Wanted.

A Liberal price will be paid for Peachand Plum stones delivered soon at the Rochester Seed Store.

sep15 REYNOLDS & BATEHAM.

New Arrival of Turnep Seeds.

WE have just received from England a large additiona supply of TURNEP SEEDS, among which are the following kinds:

Ruta Baga, or Yellow Sweedish,
Dale's Yellow Hybrid,
Yellow Bullock, Yellow Scotch,
Yellow Aberdeen, Red Round,
White Globe or Flat,
White Norfolk, Long Tankard,
Early White Flat Dutch,
White Stone, Yellow Stone,
Yellow Malta, Yellow Dutch.

☞ See descriptive list on page 198, current vol. Genesee Farmer. REYNOLDS & BATEHAM.

Rochester Seed Store, June 23, 1838.

Farmers' Books.

NOTICES on the Sugar Beet, containing a description of the culture and preservation of the plant; also explanations of the process of extracting its Sugar. Price 25 cts.

A Manual of the art of making and refining sugar from Beets. Price 75 cents.

Cobb's Manual on the Culture of Silk.
Chaptal's Agricultural Chemistry.
The Complete Farmer, by Fessenden.
Fessenden's American Gardener.
A Guide to Orchardists.
Smith's Treatise on the Honey Bee.
A Treatise on Cattle.
Mason's Farriery.
Barnum's American Farriery.
Vols. 1st and 4th, Genesee Farmer, bound.

For sale by D. HOYT,

Rochester, May 26, 1838. Bookseller, 6 State st.

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public, that he has for sale at his Nursery in Rochester, Monroe county, state of New-York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

April 15, 1838.

N. B. CASH will be paid for a few thousand two years old APPLE TREES.

Monroe Horticultural Garden & Nurseries, Greece, Monroe County, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green-House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1838. ASA ROWE.

Seed Buckwheat,

A GOOD clean article for sale low by

June 23. REYNOLDS & BATEHAM.

ELECTION NOTICE.—*Sheriff's Office, Monroe County, Rochester, July 19th*, 1838.—A general election is to be held in the county of Monroe, on the 5th, 6th and 7th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed.

DARIUS PERRIN, *Sheriff.*

State of New-York, Secretary's Office, Albany, July 16th, 1838.—SIR: I hereby give you notice, that at the next General Election in this State, to be held on the 5th, 6th and 7th days of November next, a Governor and Lieutenant Governor are to be elected.

I also give you notice, that a Senator is to be chosen in the Eighth Senate District, in the place of Isaac Lacy, whose term of office will expire on the last day of December. JOHN A DIX, *Secretary of State.*

To the Sheriff of Monroe county.

N. B. The Inspectors of Election in the several towns in your county, will give notice of the Election of a Representative to Congress from tho 28th Congressional District. They will also give notice of the Election of Members of Assembly, and for filling any vacancies in count. officers which may exist. July 28, 1838